CDP-XE270/XE370

SERVICE MANUAL

Ver 1.0 2001.03

US Model
CDP-XE270/XE370
Canadian Model
CDP-XE270
AEP Model
UK Model
E Model
Australian Model
CDP-XE270/XE370

Photo: CDP-XE370

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM66-5BD27
Base Unit Name	BU-5BD27
Optical Pick-up Name	PXR-104X

SPECIFICATIONS

Compact disc player

Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Frequency response	2 Hz to 20 kHz ± 0.5 dB
Dynamic range	More than 93 dB
Harmonic distortion	0.0045%

Outputs

	Jack type	Maximum output level	Load impedance
ANALOG OUT	Phono jacks	2 V (at 50 kilohms)	Over 10 kilohms
DIGITAL OUT (OPTICAL)	Optical output connector	–18 dBm	Wave length: 660 nm

General

Power requirements

Where purchased	Power requirements
US, Canadian models	120 V AC, 60 Hz
AEP, UK models	230 V AC, 50/60 Hz
Australian model	240 V AC, 50/60 Hz
Singapore model	220 V– 230 V AC, 50/60 Hz

Power consumption	11 W
Dimensions (approx.) (w/h/d)	430 x 95 x 290 mm incl. projecting parts
Mass (approx.)	CDP-XE370: 3.2 kg CDP-XE270: 3.2 kg

Supplied accessories

Audio cord (2 phono plugs – 2 phono plugs) (1)
Remote commander (remote) (1) (CDP-XE370 only)
R6 (size AA) batteries (2) (CDP-XE370 only)

Design and specifications are subject to change without notice.

COMPACT DISC PLAYER

9-929-591-11
2001C0500-1
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Sony Corporation
Audio Entertainment Group
General Engineering Dept.

SONY®

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Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

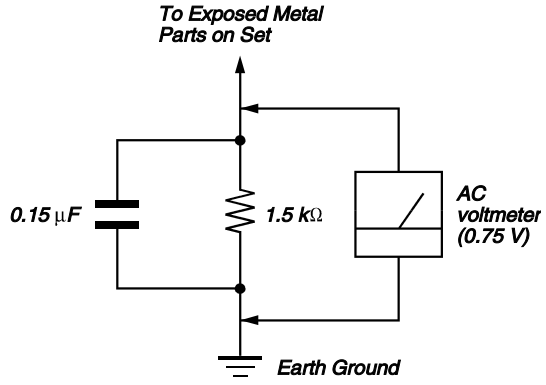


Fig. A. Using an AC voltmeter to check AC leakage.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

The following caution label is located inside the unit.

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
VORSICHT : UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET UND SICHEREITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
VARO! : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING : OSYNLING LASERSTRÅLING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVERSEL : USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VIGYAZAT! : A BURKOLAT NYITÁSAKOR LÁTHATATLAN LÉZERSUGÁRVESZÉLY! KERÜLJE A BESUGÁRZÁST!

DANGER	DANGER
INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.	RADIATION DE LESER INVISIBLE LORS D'OUVERTURE. AVEC L'ENCLENCHEMENT DE SECURITE ANNULE. EVITER L'EXPOSITION DIRECTE .AU RAYON.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

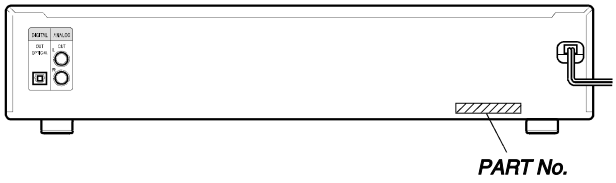
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveforms is output three times.

• MODEL IDENTIFICATION

– Rear Panel –



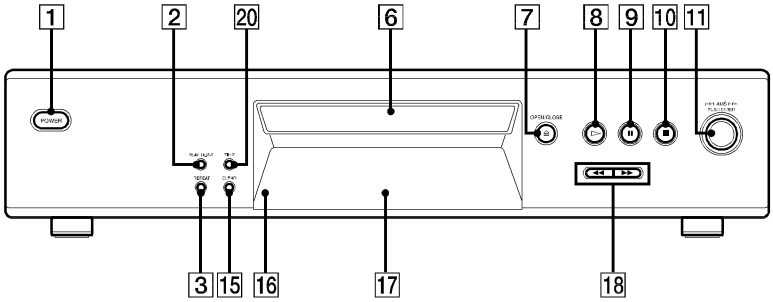
MODEL	PART No.
CDP-XE270: AEP model	4-232-151-0□
CDP-XE270: UK model	4-232-151-1□
CDP-XE270: US and Canadian models	4-232-151-2□
CDP-XE270: Australian model	4-232-151-3□
CDP-XE270: Singapore model	4-232-151-6□
CDP-XE370: AEP model	4-232-692-0□
CDP-XE370: UK model	4-232-692-1□
CDP-XE370: US model	4-232-692-2□
CDP-XE370: Australian model	4-232-692-3□
CDP-XE370: Singapore model	4-232-692-6□

This section is extracted from instruction manual.

SECTION 2
GENERAL

LOCATION OF CONTROLS

– FRONT PANEL –

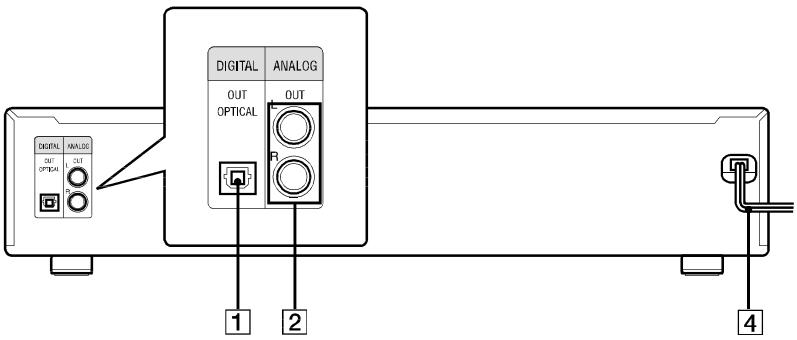


CLEAR 15 (12)
Disc compartment 6 (8)
Display 17 (10)
PLAY MODE 2 (9, 12, 14)
POWER 1 (8)
Remote sensor 16 (7)
(CDP-XE370 only)
REPEAT 3 (9, 11)
TIME 20 (10)

BUTTON DESCRIPTIONS

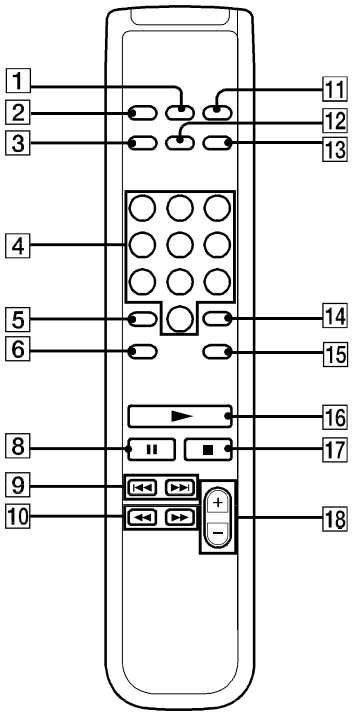
⏏ OPEN/CLOSE 7 (8, 10, 12)
▷ 8 (9, 11, 12, 14)
❚❚ 9 (9, 14)
■ 10 (9, 14)
I◁◁AMS▷▷I dial 11 (9, 12, 14)
◀◀/▶▶ 18 (9, 13)

– REAR PANEL –



ANALOG OUT L/R jacks 2 (7)
DIGITAL OUT OPTICAL jack 1 (8)
Mains lead 4 (7)

– REMOTE CONTROL – (CDP-XE370 only)



ANALOG OUT LEVEL +/– 18 (7, 9)
CHECK 15 (12)
CLEAR 14 (12)
CONTINUE 2 (9, 14)
DISPLAY ON/OFF 12 (11)
FADER 13 (13)
Number buttons 4 (9, 12)
PROGRAM 11 (9)
REPEAT 6 (9)
SHUFFLE 1 (9)
TIME 3 (10)

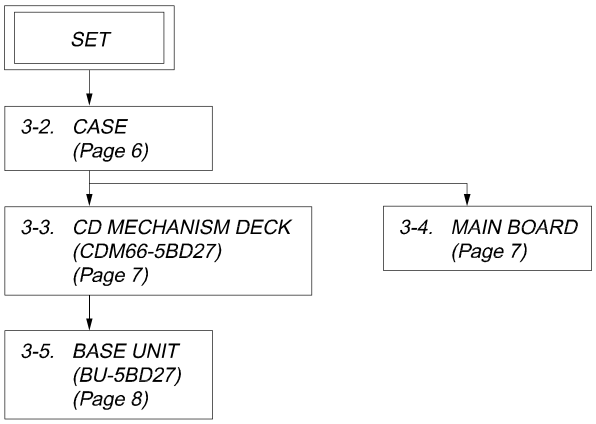
BUTTON DESCRIPTIONS

>10 5 (9, 12)
► 16 (9, 11, 12, 14)
❚❚ 8 (9, 14)
■ 17 (9, 14)
I◀◀ AMS ▶▶I 9 (9, 12, 14)
◀◀/▶▶ 10 (9, 13)

SECTION 3
DISASSEMBLY

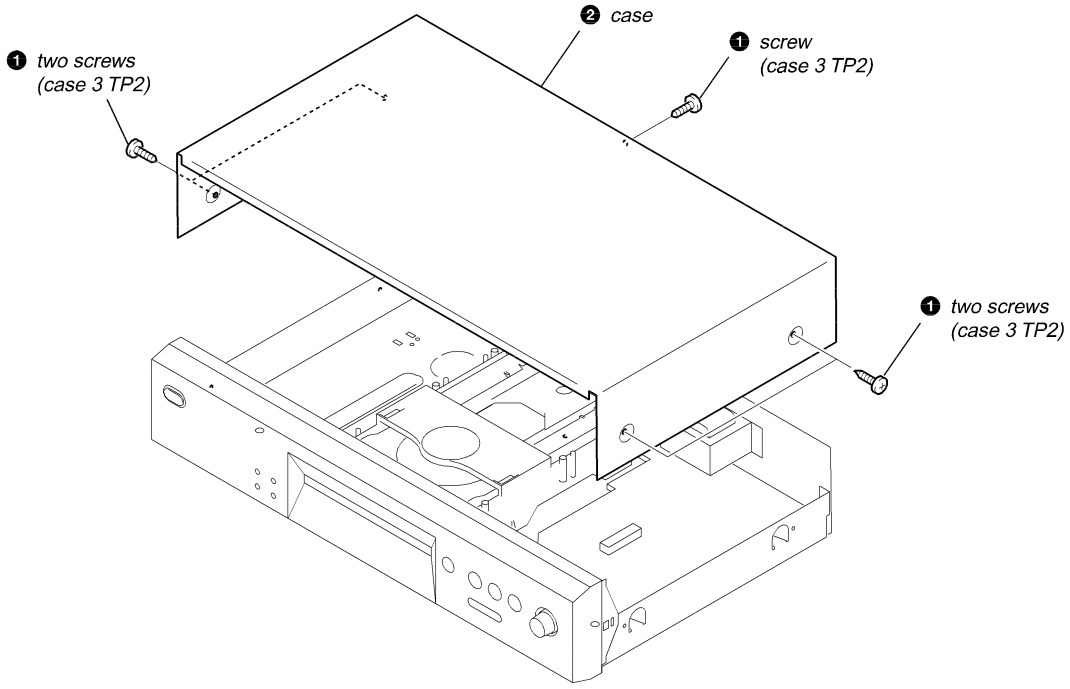
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

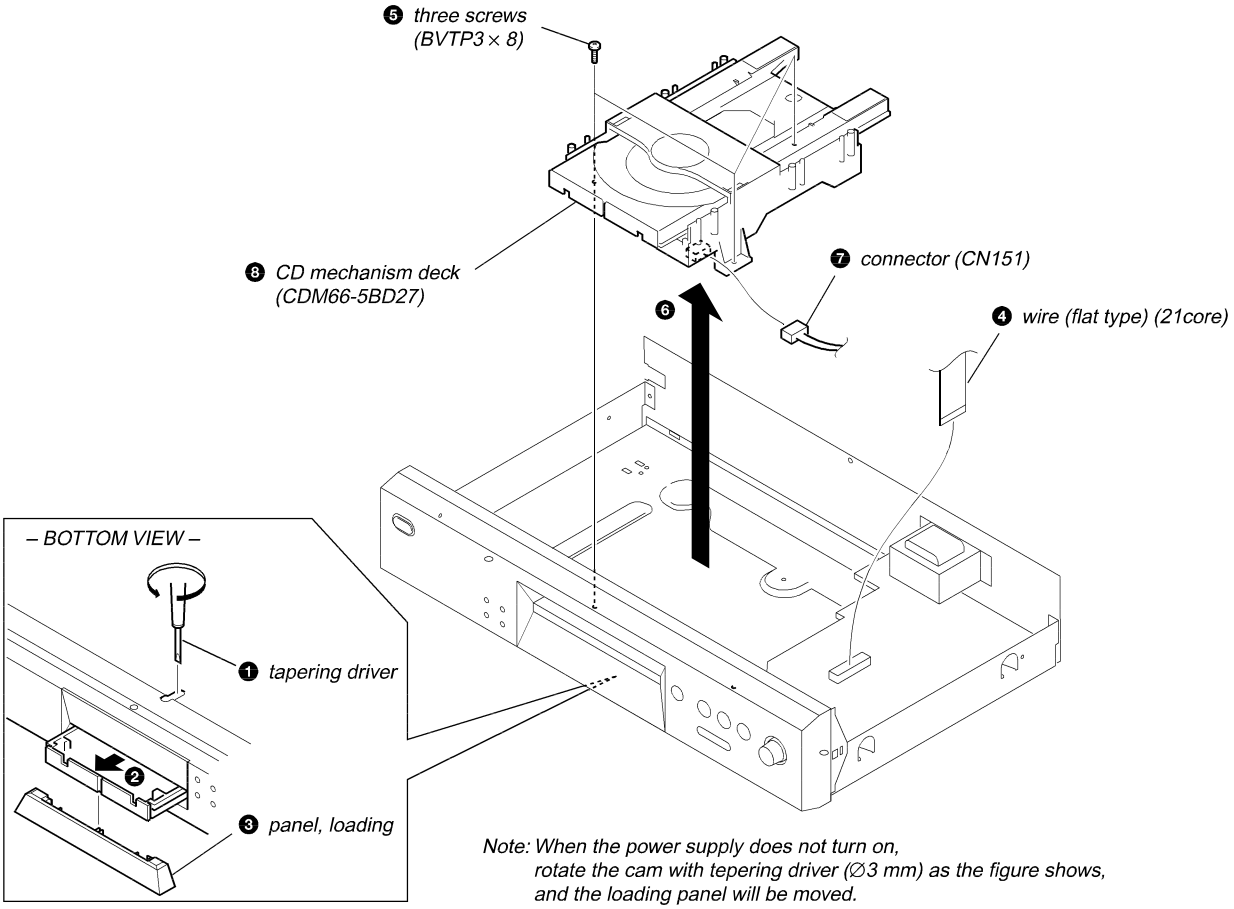


Note: Follow the disassembly procedure in the numerical order given.

3-2. CASE

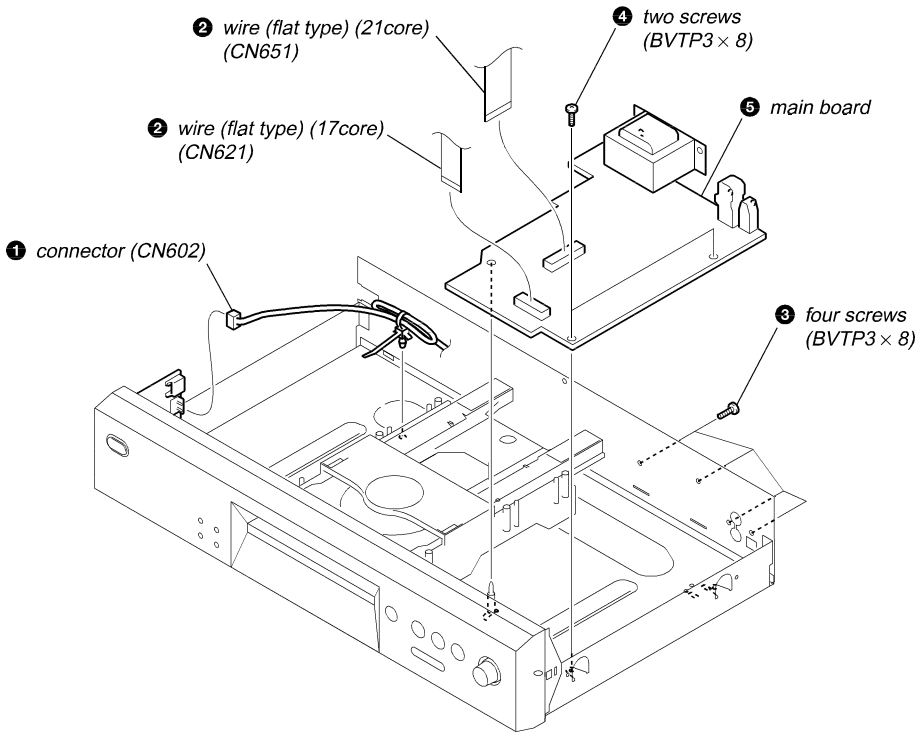


3-3. CD MECHANISM DECK (CDM66-5BD27)

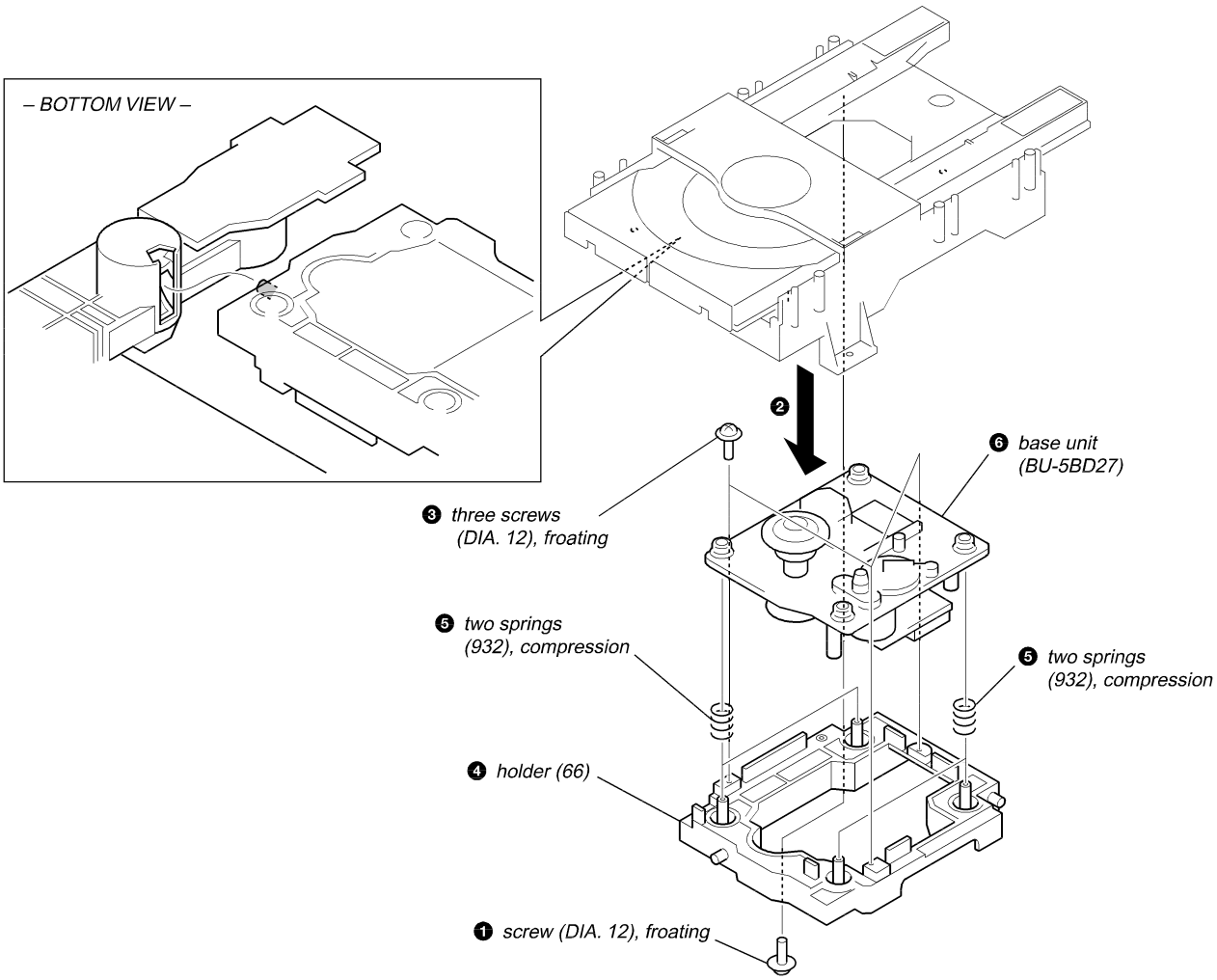


Note: When the power supply does not turn on,
rotate the cam with tepering driver (∅3 mm) as the figure shows,
and the loading panel will be moved.

3-4. MAIN BOARD


❷ wire (flat type) (21core) (CN651)
❹ two screws (BVTP3 × 8)
❺ main board
❷ wire (flat type) (17core) (CN621)
❶ connector (CN602)
❸ four screws (BVTP3 × 8)

3-5. BASE UNIT (BU-5BD27)



SECTION 4
TEST MODE

AGING MODE

Procedure:

1. While pressing the both [■] and [CLEAR] buttons, turn the power on.
2. Tray open-close aging is performed.
3. Press the [TIME] button to display time for open-close on the fluorescent indicator tube.
4. To release the mode, press the [POWER] button to turn OFF the power.

CHECK MODE

Procedure:

1. Press the [POWER] button to turn ON the power
2. Press the [⏏ OPEN/CLOSE] button and insert the disc.
3. Press the [POWER] button to turn OFF the power.
4. While pressing the both [PLAY MODE] and [▷] buttons, turn the power on .
5. CD starts playing, and every time the [TIME] button is pressed, RFDC and OFFSET are changed over.
6. To release the mode, press the [POWER] button to turn OFF the power.

ADJ MODE

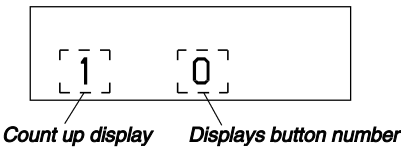
Procedure:

1. Press the [POWER] button to turn ON the power
2. Press the [⏏ OPEN/CLOSE] button and insert the disc.
3. Press the [POWER] button to turn OFF the power.
4. Short-circuit the test TP (ADJ) of the DISPLAY board and ground with a lead wire.
5. Press the [POWER] button to turn ON the power and CD plays the second track.
6. To release the mode, press the [POWER] button to turn OFF the power.
7. Open-circuit the test TP (ADJ) of the DISPLAY board and ground with a lead wire.

AFADJ MODE (KEY AND FLUORESCENT INDICATOR TUBE DISPLAY CHECK MODE)

Procedure:

1. Short-circuit the test TP (AFADJ) of the DISPLAY board and ground with a lead wire.
2. Press the [POWER] button to turn ON the power.
   The whole fluorescent indicator tube lights up.
3. All buttons have individual button numbers.
   When a button is pressed, the button number is counted up and displayed.



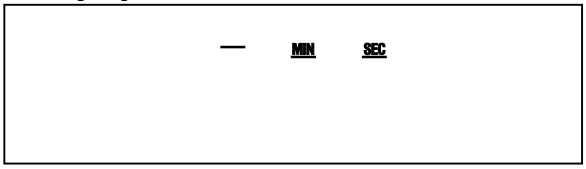
   When remote controller signals are received, "RM ∗∗" will be displayed.
   (∗∗ are the numbers corresponding to the remote controller buttons.) (CDP-CE370 only)

4. To release the mode, press the [POWER] button to turn OFF the power.
5. Open-circuit the test TP (AFADJ) of the DISPLAY board and ground with a lead wire.

Buttons and Corresponding Button Numbers

Button	Button Number or Display
▷ (PLAY)	Partical lighting 1
❚❚ (PAUSE)	02
■ (STOP)	Partical lighting 2
⏮⏭AMS⏮⏭ (button)	04
◀◀	05
▶▶	06
TIME	07
PLAY MODE	08
CLEAR	09
REPEAT	10
⏏ OPEN/CLOSE	All lit
⏮⏭AMS⏮⏭ (knob)	When rotated clockwise: The music calendar numerals light up in ascending order. When rotated counterclockwise: The music calendar numerals light up in descending order.

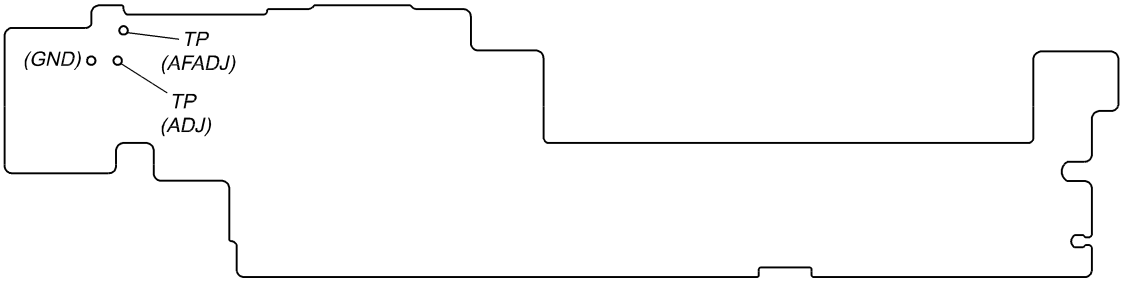
Partial lighting 1



Partial lighting 2

Checking Location:

– DISPLAY BOARD (Conductor Side) –



SECTION 5
DIAGRAMS

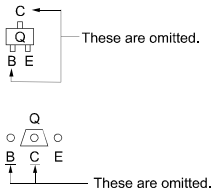
5-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:
- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

- Indication of transistor

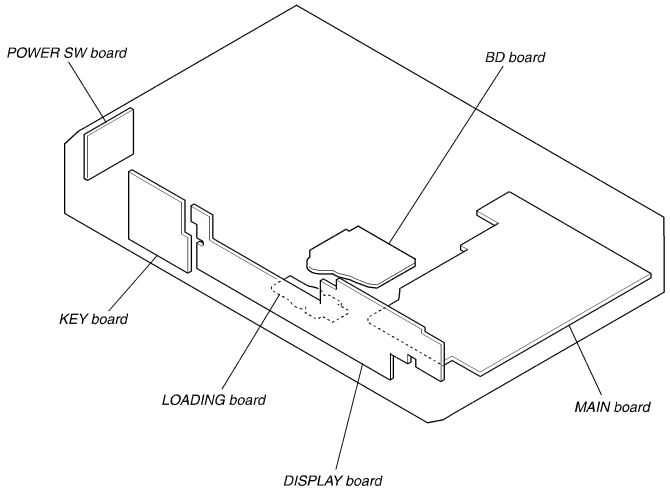


Note on Schematic Diagram:
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ▭ : panel designation.

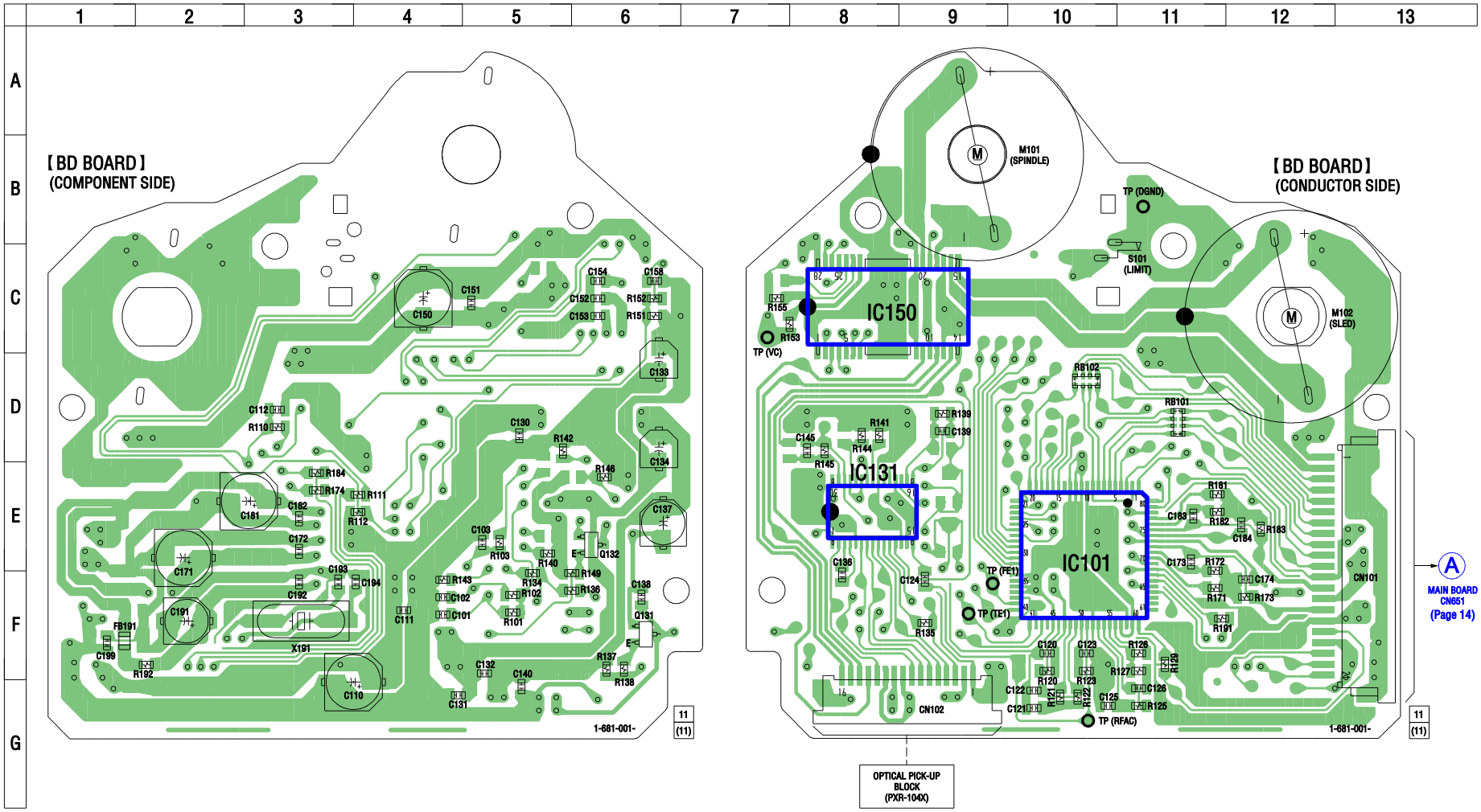
Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬▬ : B+ Line.
- ▬ ▬ ▬ : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
- Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD PLAY (ANALOG OUT)
  ⇨ : CD PLAY (DIGITAL OUT)

- **Circuit Boards Location**



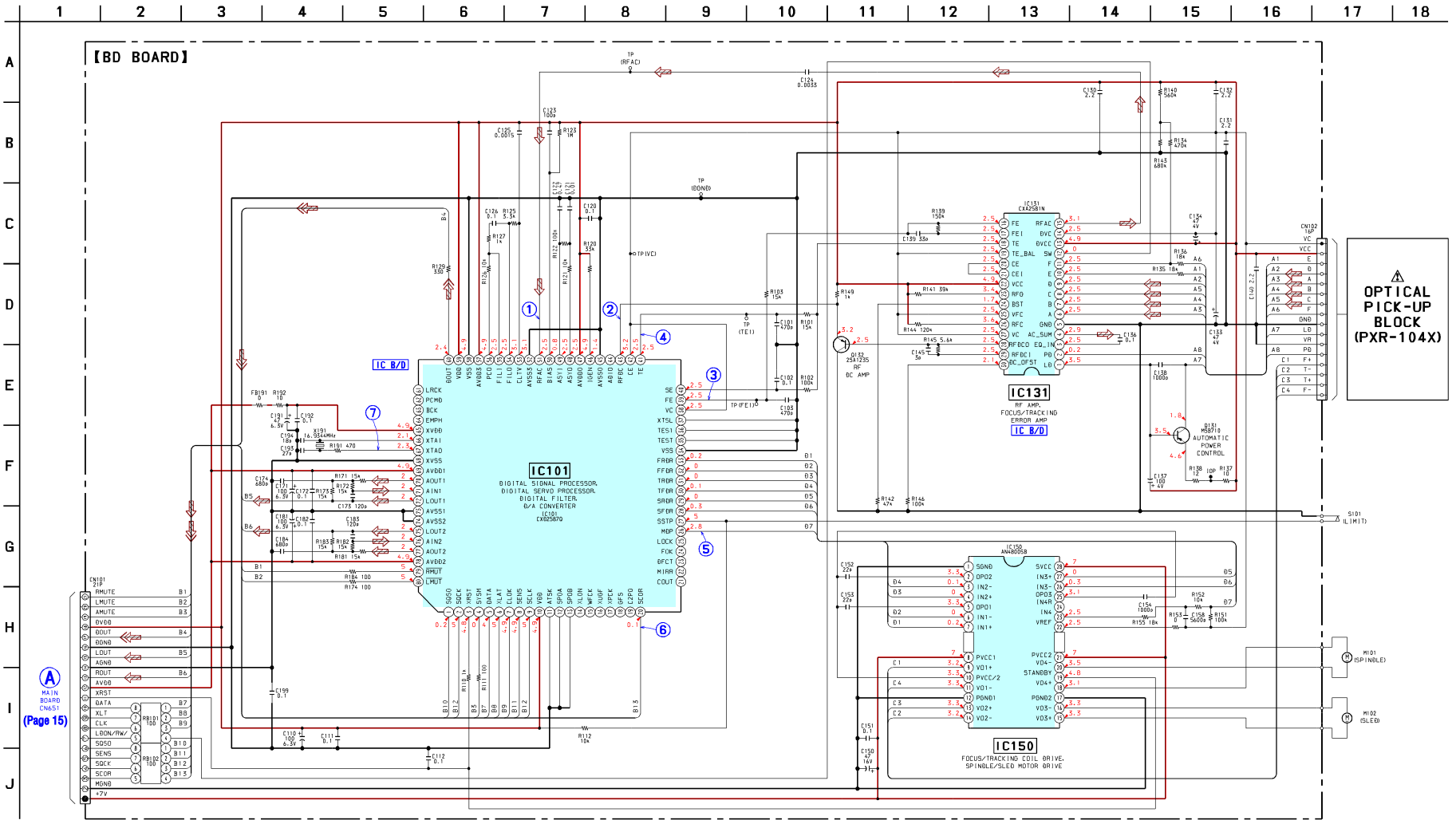
5-2. PRINTED WIRING BOARD – BD Board – • See page 11 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location
IC101	E-10
IC131	E-8
IC150	C-8
Q131	F-6
Q132	E-6

5-3. SCHEMATIC DIAGRAM – BD Board – • See page 18 for Waveforms. • See page 18 for IC Block Diagrams.

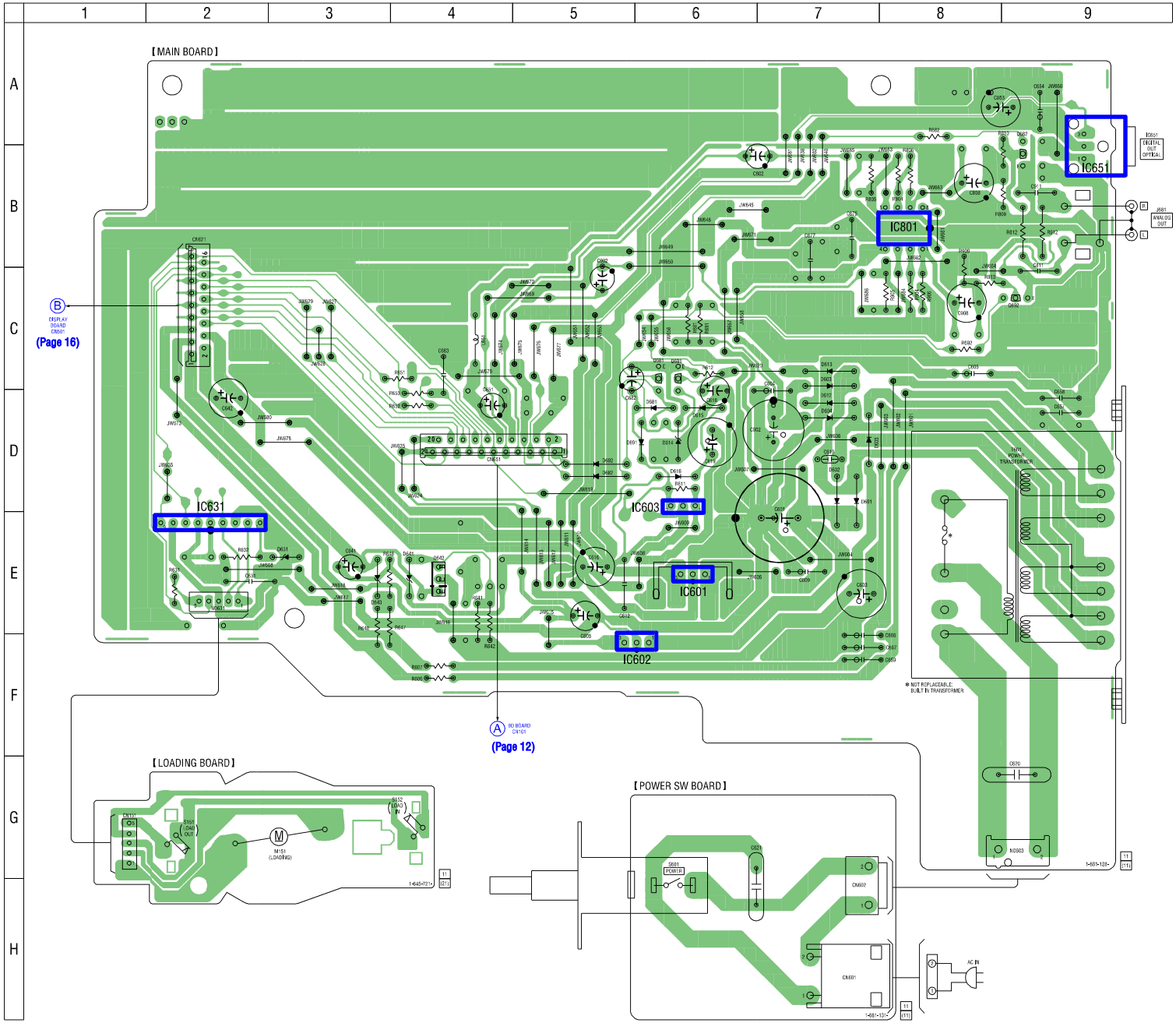


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

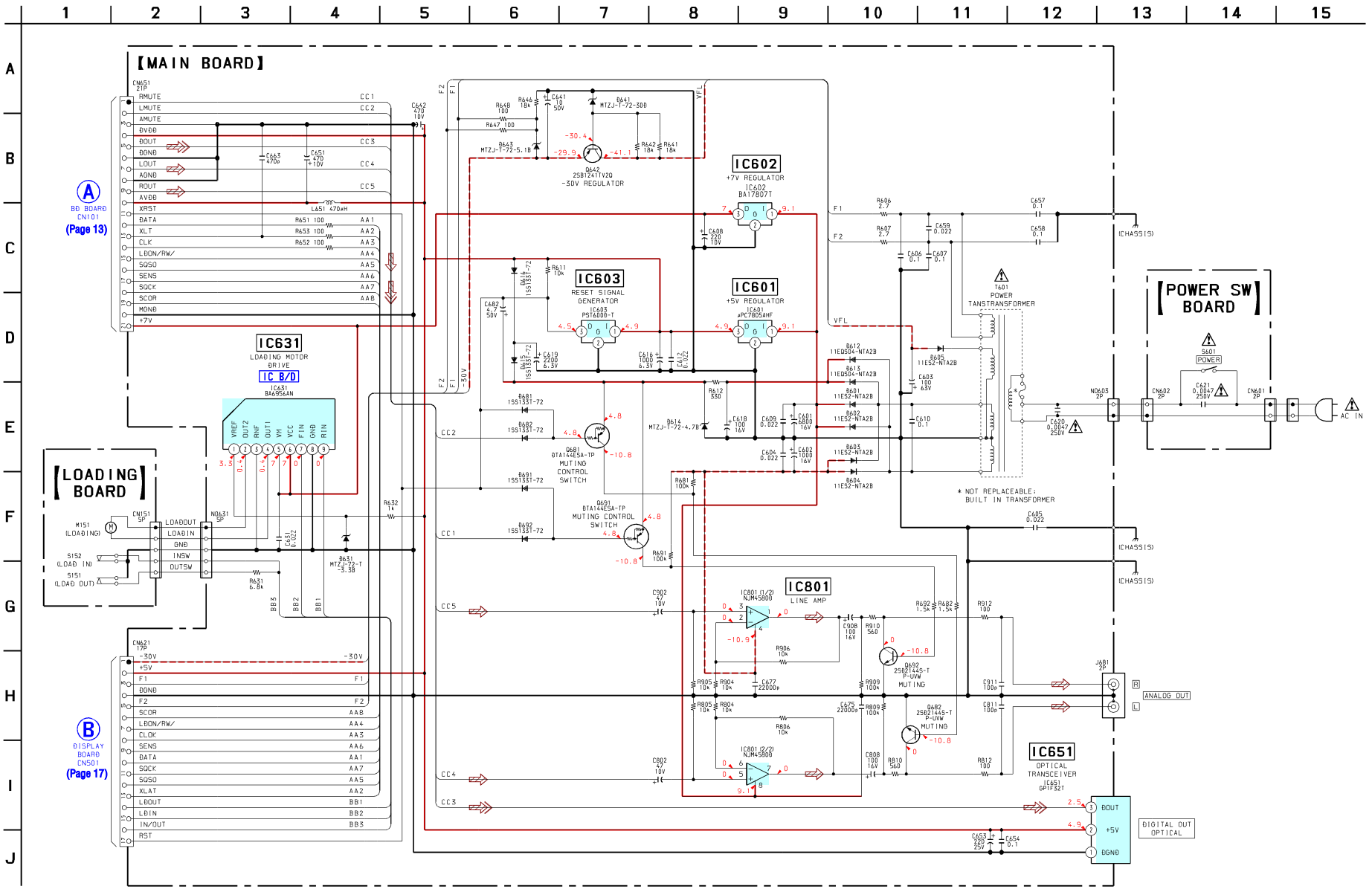
5-4. PRINTED WIRING BOARDS – LOADING/MAIN/POWER SW Boards – • See page 11 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D601	D-7
D602	D-7
D603	C-7
D604	D-7
D605	D-7
D612	D-7
D613	C-7
D614	D-6
D615	D-6
D616	D-6
D631	E-3
D641	E-4
D643	E-3
D681	D-6
D682	D-5
D691	D-6
D692	D-5
IC601	E-6
IC602	F-6
IC603	D-6
IC631	E-2
IC651	B-9
IC801	B-8
Q642	E-4
Q681	C-6
Q682	B-9
Q691	C-6
Q692	C-9

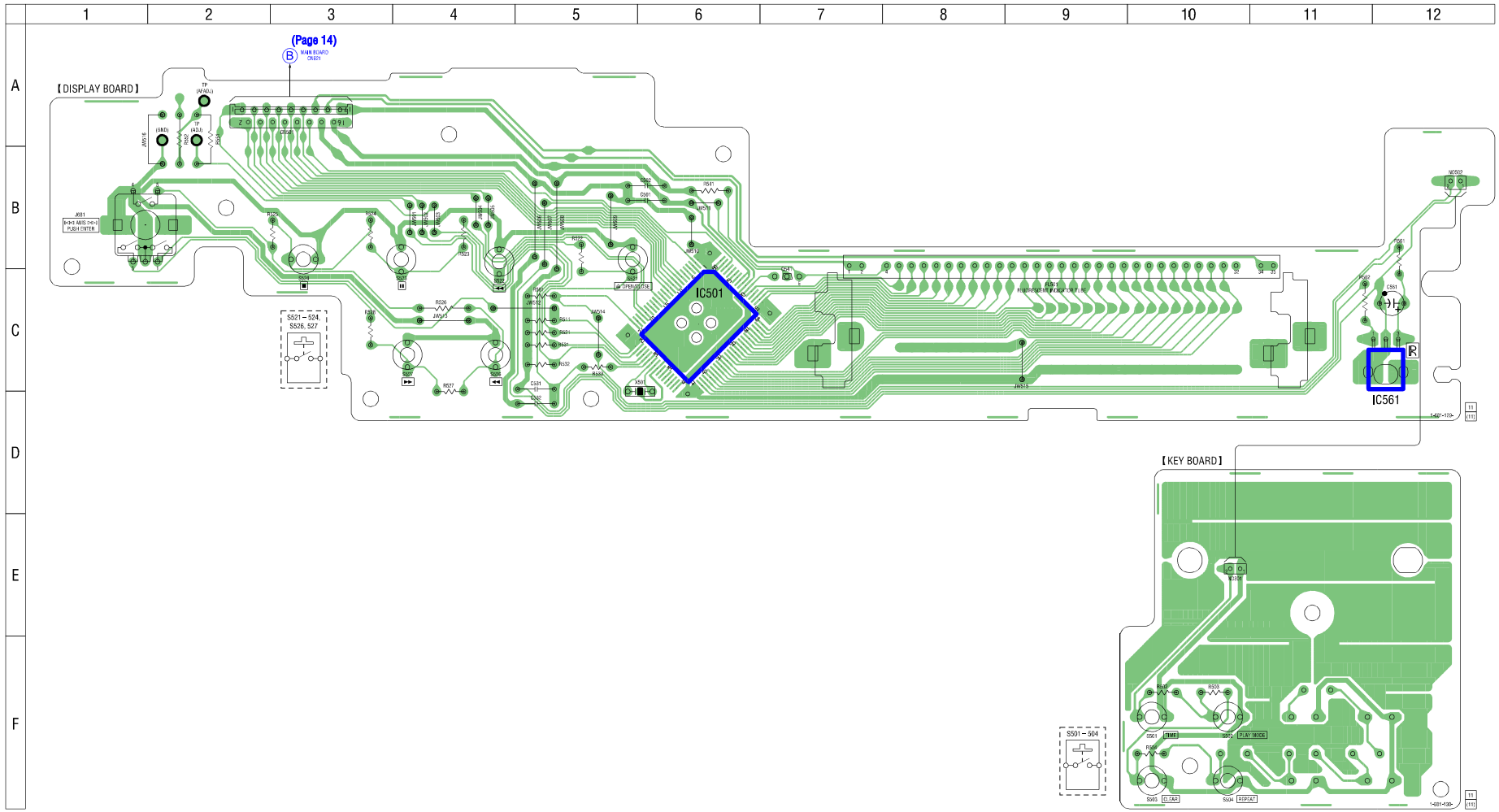


5-5. SCHEMATIC DIAGRAM – LOADING/MAIN/POWER SW Boards – • See page 18 for IC Block Diagram.



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

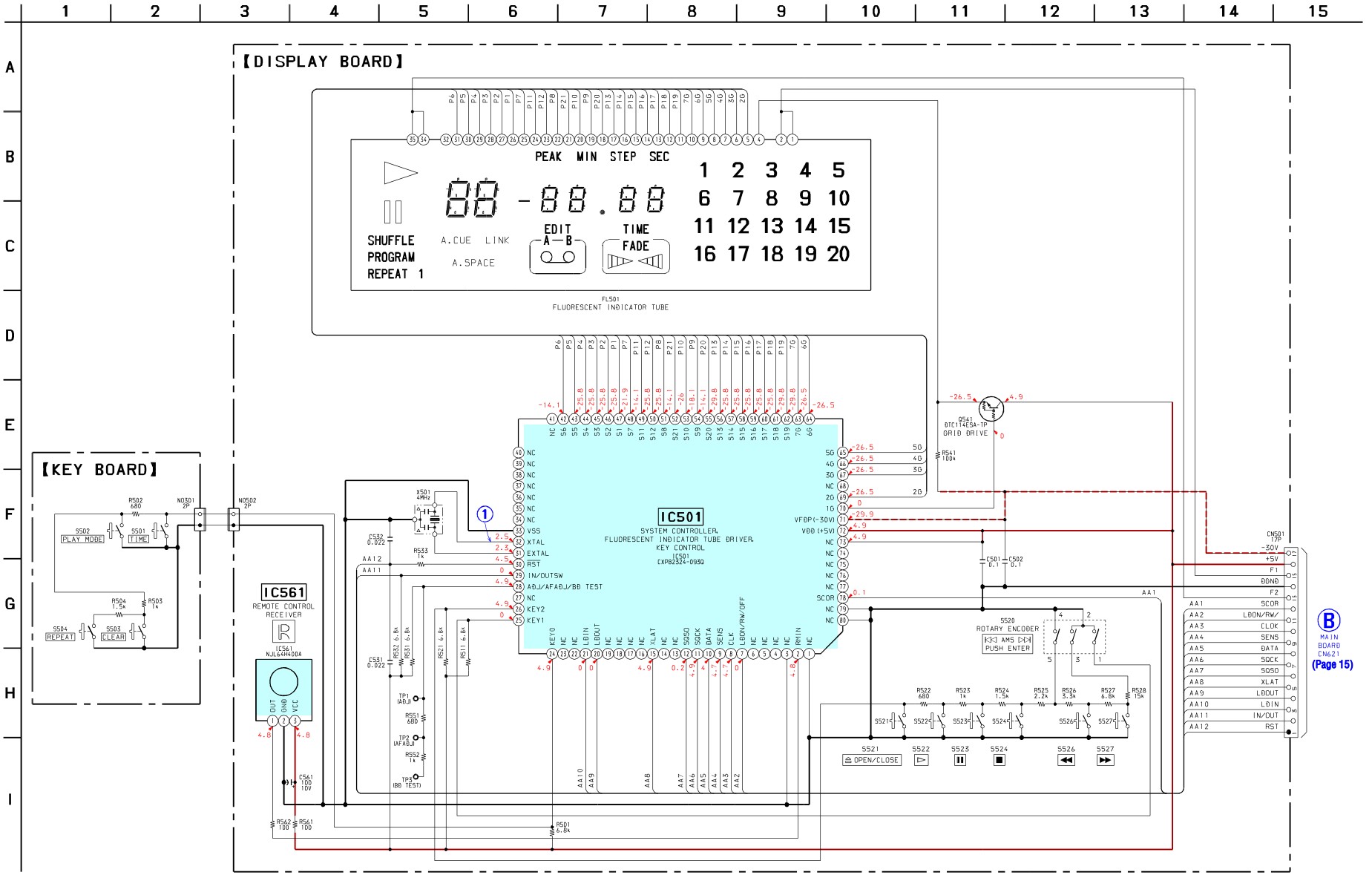
5-6. PRINTED WIRING BOARDS – DISPLAY/KEY Boards – **• See page 11 for Circuit Boards Location.**



- **Semiconductor Location**

Ref. No.	Location
IC501	C-6
IC561	C-12
Q541	C-7

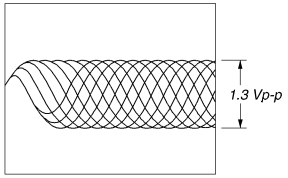
5-7. SCHEMATIC DIAGRAM – DISPLAY/KEY Boards – **• See page 18 for Waveform.**



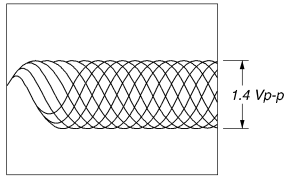
• **Waveforms**

– BD Board –

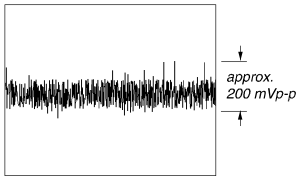
❶ IC101 ㊶ (RFAC) (CD Play Mode)



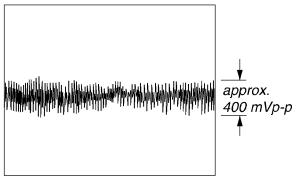
❷ IC101 ㊸ (RFDC) (CD Play Mode)



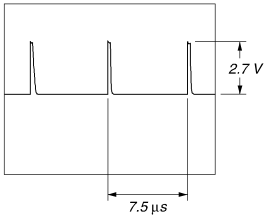
❸ IC101 ㊴ (FE) (CD Play Mode)



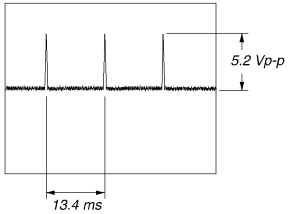
❹ IC101 ㊶ (TE) (CD Play Mode)



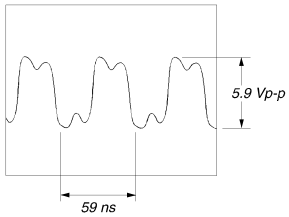
❺ IC101 ㉘ (MDP) (CD Play Mode)



❻ IC101 ㉙ (SCOR) (CD Play Mode)

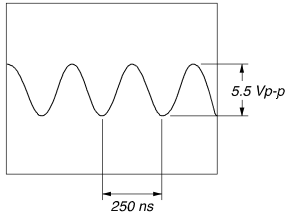


❼ IC101 ㊼ (XTAO) (CD Play Mode)



– DISPLAY Board –

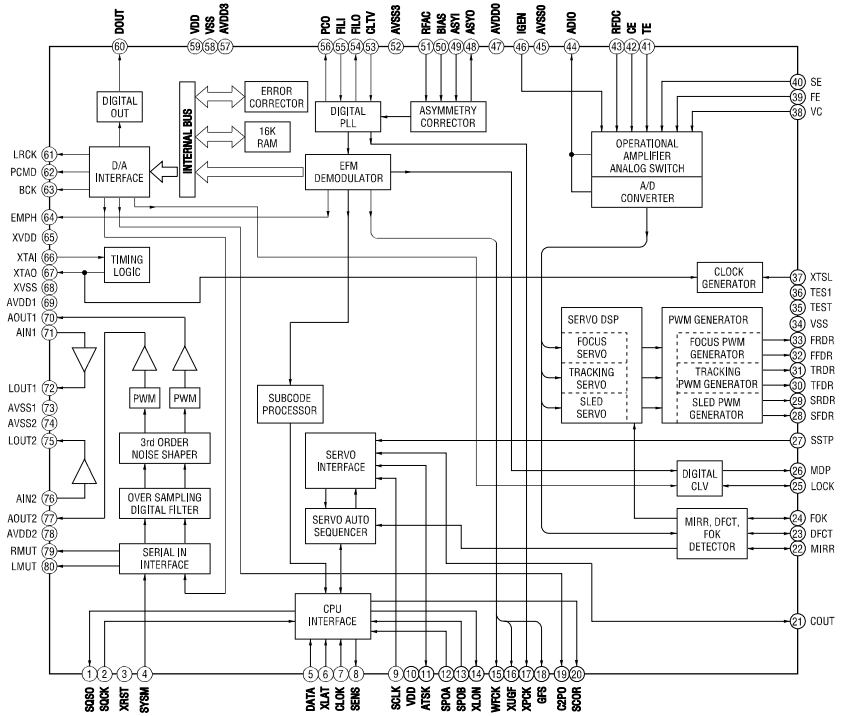
❶ IC501 ㉜ (XTAL)



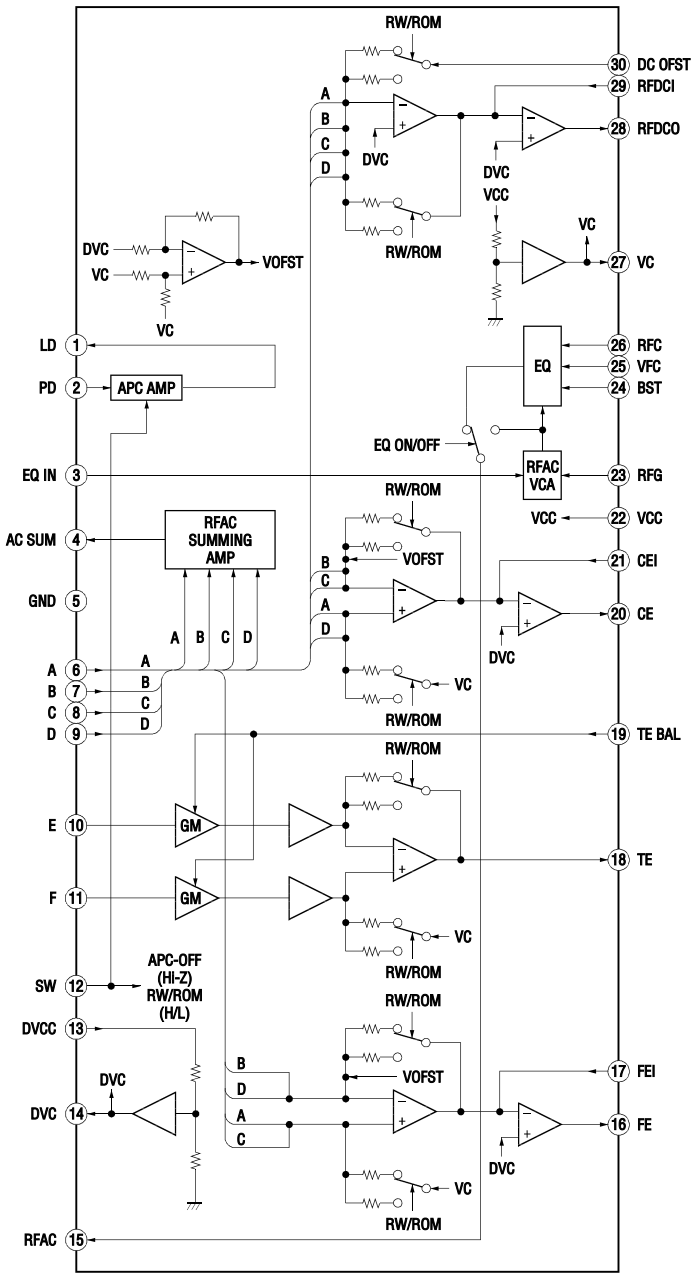
• **IC Block Diagrams**

– BD Board –

IC101 CXD2587Q

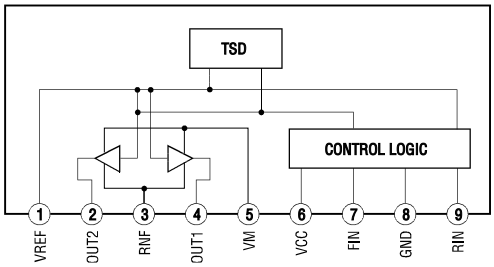


IC131 CXA2581N-T4



– MAIN Board –

IC631 BA6956AN



5-8. IC PIN FUNCTION DESCRIPTION

• BD BOARD IC101 CXD2587Q
(DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR, DIGITAL FILTER, D/A CONVERTER)

Pin No.	Pin Name	I/O	Description
1	SQSO	O	Subcode Q data output to the system controller (IC501)
2	SQCK	I	Subcode Q data reading clock signal input from the system controller (IC501)
3	XRST	I	System reset signal input from the system controller (IC501) "L": reset
4	SYSM	I	Analog line muting on/off control signal input terminal "H": line muting on Not used (fixed at "L")
5	DATA	I	Serial data input from the system controller (IC501)
6	XLAT	I	Serial data latch pulse signal input from the system controller (IC501)
7	CLOK	I	Serial data transfer clock signal input from the system controller (IC501)
8	SENS	O	Internal status (SENSE) output to the system controller (IC501)
9	SCLK	I	SENSE serial data reading clock signal input from the system controller (IC501)
10	VDD	—	Power supply terminal (+5V) (digital system)
11	ATSK	I/O	Input/output terminal for anti-shock Not used (pull down)
12	SPOA	I	Microcomputer escape interface input A terminal Not used (fixed at "L")
13	SPOB	I	Microcomputer escape interface input B terminal Not used (fixed at "L")
14	XLON	O	Microcomputer escape interface output terminal Not used (open)
15	WFCK	O	Write frame clock signal output terminal Not used (open)
16	XUGF	O	XUGF signal output terminal Not used (open)
17	XPCK	O	XPCK signal output terminal Not used (open)
18	GFS	O	Guard frame sync signal output terminal Not used (open)
19	C2PO	O	C2 pointer signal output terminal Not used (open)
20	SCOR	O	Subcode sync (S0+S1) detection signal output to the system controller (IC501)
21	COUT	I/O	Numbers of track counted signal input/output terminal Not used (open)
22	MIRR	I/O	Mirror signal input/output terminal Not used (open)
23	DFCT	I/O	Defect signal input/output terminal Not used (open)
24	FOK	I/O	Focus OK signal input/output terminal Not used (open)
25	LOCK	I/O	GFS is sampled by 460 Hz "H" when GFS is "H" Not used (open)
26	MDP	O	Spindle motor (M101) servo drive signal output to the AN4800SB (IC150)
27	SSTP	I	Detection signal input from limit in switch (S101) The optical pick-up is inner position when "H"
28	SFDR	O	Sled servo drive PWM signal (+) output to the AN4800SB (IC150)
29	SRDR	O	Sled servo drive PWM signal (–) output to the AN4800SB (IC150)
30	TFDR	O	Tracking servo drive PWM signal (+) output to the AN4800SB (IC150)
31	TRDR	O	Tracking servo drive PWM signal (–) output to the AN4800SB (IC150)
32	FFDR	O	Focus servo drive PWM signal (+) output to the AN4800SB (IC150)
33	FRDR	O	Focus servo drive PWM signal (–) output to the AN4800SB (IC150)
34	VSS	—	Ground terminal (digital system)
35	TEST	I	Input terminal for the test (fixed at "L")
36	TES1	I	Input terminal for the test (fixed at "L")
37	XTSL	I	Input terminal for the system clock frequency setting "L": 16.9344 MHz, "H": 33.8688 MHz (fixed at "L" in this set)
38	VC	I	Middle point voltage (+2.5V) input from the CXA2581N (IC131)
39	FE	I	Focus error signal input from the CXA2581N (IC131)
40	SE	I	Sled error signal input from the CXA2581N (IC131)
41	TE	I	Tracking error signal input from the CXA2581N (IC131)
42	CE	I	Middle point servo analog signal input from the CXA2581N (IC131)
43	RFDC	I	RF signal input from the CXA2581N (IC131)

Pin No.	Pin Name	I/O	Description
44	ADIO	O	Output terminal for the test Not used (open)
45	AVSS0	—	Ground terminal (digital system)
46	IGEN	I	Stabilized current input for operational amplifiers
47	AVDD0	—	Power supply terminal (+5V) (digital system)
48	ASYO	O	EFM full-swing output terminal
49	ASYI	I	Asymmetry comparator voltage input terminal
50	BIAS	I	Asymmetry circuit constant current input terminal
51	RFAC	I	EFM signal input from the CXA2581N (IC131)
52	AVSS3	—	Ground terminal (digital system)
53	CLTV	I	Internal VCO control voltage input
54	FILO	O	Filter output for master PLL
55	FILI	I	Filter input for master PLL
56	PCO	O	Charge pump output for master PLL
57	AVDD3	—	Power supply terminal (+5V) (digital system)
58	VSS	—	Ground terminal (digital system)
59	VDD	—	Power supply terminal (+5V) (digital system)
60	DOUT	O	Digital audio signal output to the DIGITAL OUT OPTICAL (IC651)
61	LRCK	O	D/A interface L/R sampling clock signal (44.1 kHz) output terminal Not used (open)
62	PCMD	O	D/A interface serial data output terminal Not used (open)
63	BCK	O	D/A interface bit clock signal (2.8224 MHz) output terminal Not used (open)
64	EMPH	O	"H" is output when playback disc is emphasis on "L" is output when playback disc is emphasis off Not used (open)
65	XVDD	—	Power supply terminal (+5V) (crystal oscillator system)
66	XTAI	I	System clock input terminal (16.9344 MHz)
67	XTAO	O	System clock output terminal (16.9344 MHz)
68	XVSS	—	Ground terminal (crystal oscillator system)
69	AVDD1	—	Power supply terminal (+5V) (analog system)
70	AOUT1	O	L-ch analog audio signal output
71	AIN1	I	L-ch operational amplifiers input
72	LOUT1	O	L-ch line output
73	AVSS1	—	Ground terminal (analog system)
74	AVSS2	—	Ground terminal (analog system)
75	LOUT2	O	R-ch line output
76	AIN2	I	R-ch operational amplifiers input
77	AOUT2	O	R-ch analog audio signal output
78	AVDD2	—	Power supply terminal (+5V) (analog system)
79	$\overline{\text{RMUT}}$	O	R-ch line muting on/off control signal output "L": line muting on
80	$\overline{\text{LMUT}}$	O	L-ch line muting on/off control signal output "L": line muting on

- **DISPLAY BOARD IC501 CXP82324-093Q**
  (SYSTEM CONTROLLER, FLUORESCENT INDICATOR TUBE DRIVER, KEY CONTROL)

Pin No.	Pin Name	I/O	Description
1	NC	I	Connected to the ground
2	RMIN	I	Remote control signal input from the remote control receiver (IC561)
3	NC	I	Connected to the ground
4 to 6	NC	O	Not used (open)
7	LDON/RW/OFF	O	CD-ROM/RW selection signal output "L": CD-ROM, "H": CD-RW
8	CLK	O	Serial data transfer clock signal output to the CXD2587Q (IC101)
9	SENS	I	Internal status (SENSE) signal input from the CXD2587Q (IC101)
10	DATA	O	Serial data output to the CXD2587Q (IC101)
11	SQCK	O	Subcode Q data reading clock signal output to the CXD2587Q (IC101)
12	SQSO	I	Subcode Q data signal input from the CXD2587Q (IC101)
13, 14	NC	O	Not used (open)
15	XLAT	O	Serial data latch pulse signal output to the CXD2587Q (IC101)
16 to 19	NC	O	Not used (open)
20	LDOUT	O	Loading motor (M151) drive signal output to the BA6956AN (IC631) "H" active *1
21	LDIN	O	Loading motor (M151) drive signal output to the BA6956AN (IC631) "H" active *1
22, 23	NC	O	Not used (open)
24	KEY0	I	Key input terminal (A/D input) S501 to S504 (TIME, PLAY MODE, CLEAR, REPEAT) keys input
25	KEY1	I	Key input terminal (A/D input) S520 (1/2) (⏮ AMS ⏭) keys input
26	KEY2	I	Key input terminal (A/D input) S520 (2/2) to S524, S526, S527 (⏮ AMS ⏭ PUSH ENTER, ⏏ OPEN/CLOSE, ▷, ⏸, ■, ⏩, ⏪) keys input
27	NC	O	Not used (open)
28	ADJ/AFADJ/BD TEST	I	Setting terminal for the test mode "L": ADJ test mode, "M": AFADJ test mode, "H": BD test mode
29	IN/OUT SW	I	Loading in detect switch (S152) and loading out detect switch (S151) input terminal "L": load in, "H": load out
30	$\overline{\text{RST}}$	I	System reset signal input from the reset signal generator (IC603) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
31	EXTAL	I	Main system clock input terminal (4 MHz)
32	XTAL	O	Main system clock output terminal (4 MHz)
33	VSS	—	Ground terminal
34 to 41	NC	O	Not used (open)
42 to 47	S6 to S1	O	Segment drive signal output to the fluorescent indicator tube (FL501)
48 to 55	S7, S11, S12, S8, S21, S10, S9, S20	O	Segment drive signal output to the fluorescent indicator tube (FL501)
56 to 62	S13 to S19	O	Segment drive signal output to the fluorescent indicator tube (FL501)
63 to 67	7G to 3G	O	Grid drive signal output to the fluorescent indicator tube (FL501)
68	NC	O	Not used (open)
69, 70	2G, 1G	O	Grid drive signal output to the fluorescent indicator tube (FL501)
71	VFDP (–30V)	—	Power supply terminal (–30V) (for fluorescent indicator tube drive)
72	VDD (+5V)	—	Power supply terminal (+5V)

*1 Loading motor (M151) control

Operation / Terminal	OFF	OUT	IN	BRAKE
LDIN (pin ㉑)	"L"	"L"	"H"	"H"
LDOUT (pin ⑳)	"L"	"H"	"L"	"H"

Pin No.	Pin Name	I/O	Description
73	NC	—	Connected to the +5V power supply
74 to 77	NC	O	Not used (open)
78	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD2587Q (IC101)
79, 80	NC	I	Connected to the ground

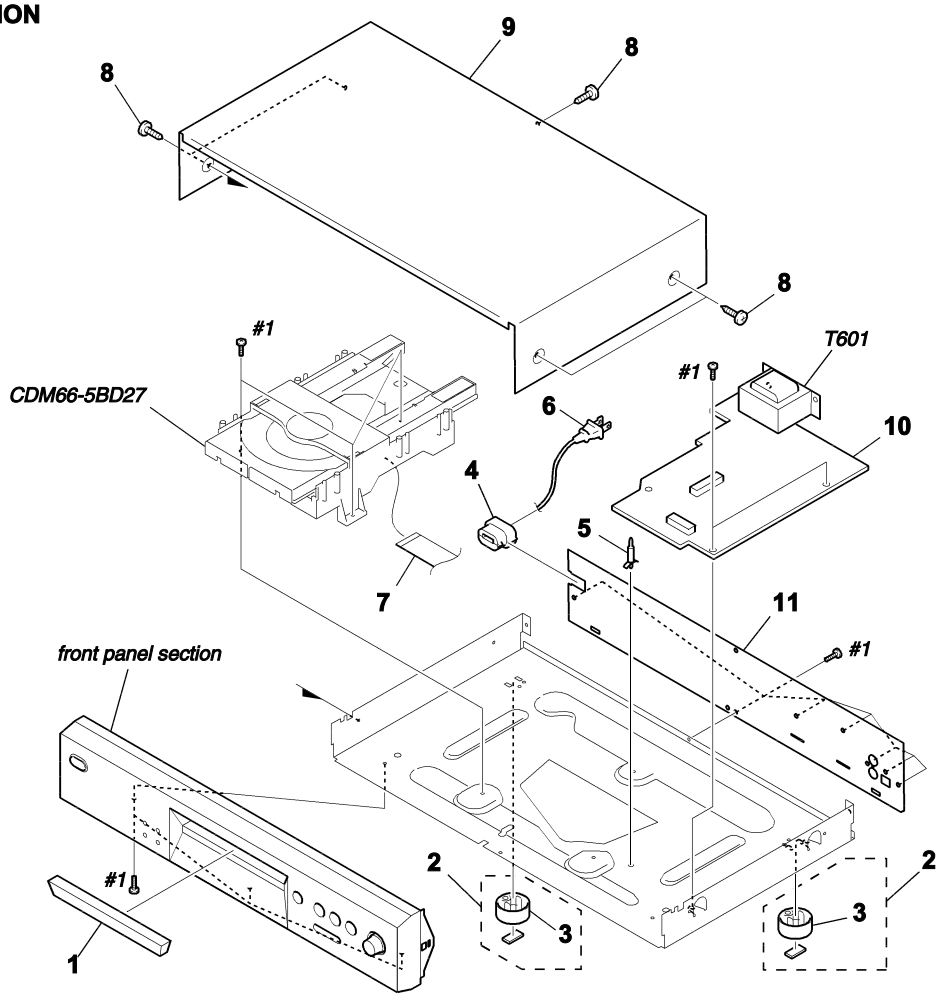
SECTION 6
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  AUS : Australian model SP : Singapore model
  CND : Canadian model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of the electrical parts list.
- Accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

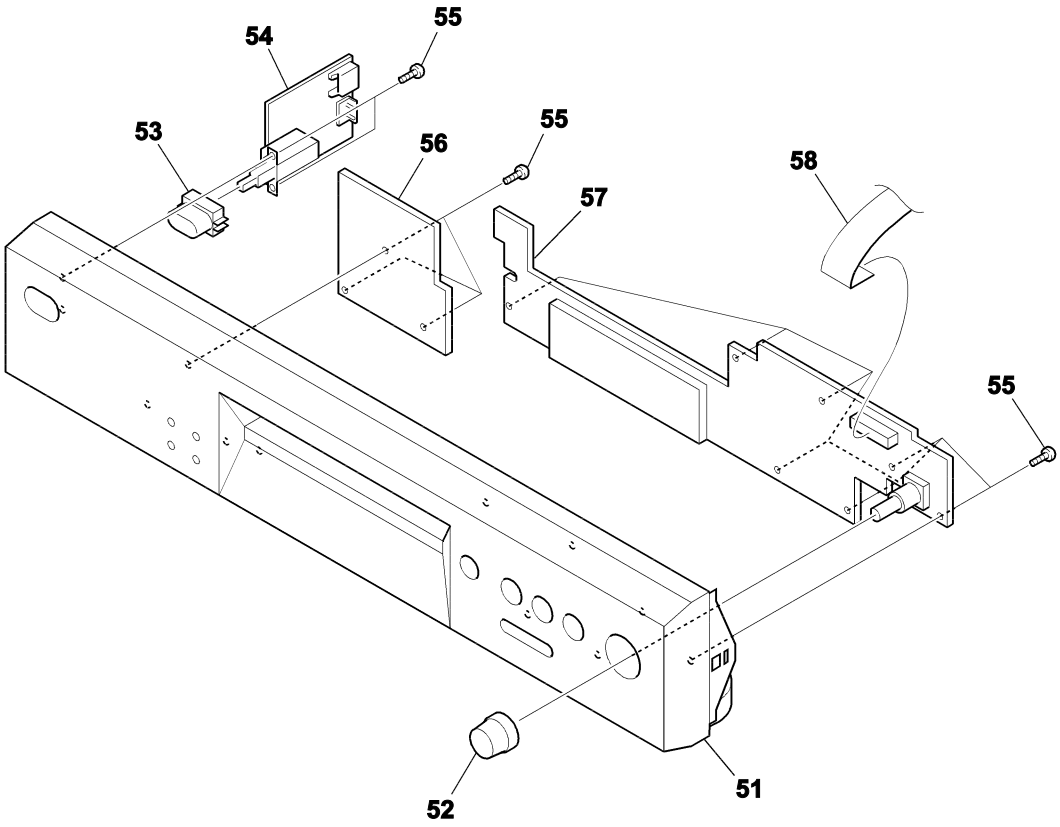
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. CASE SECTION



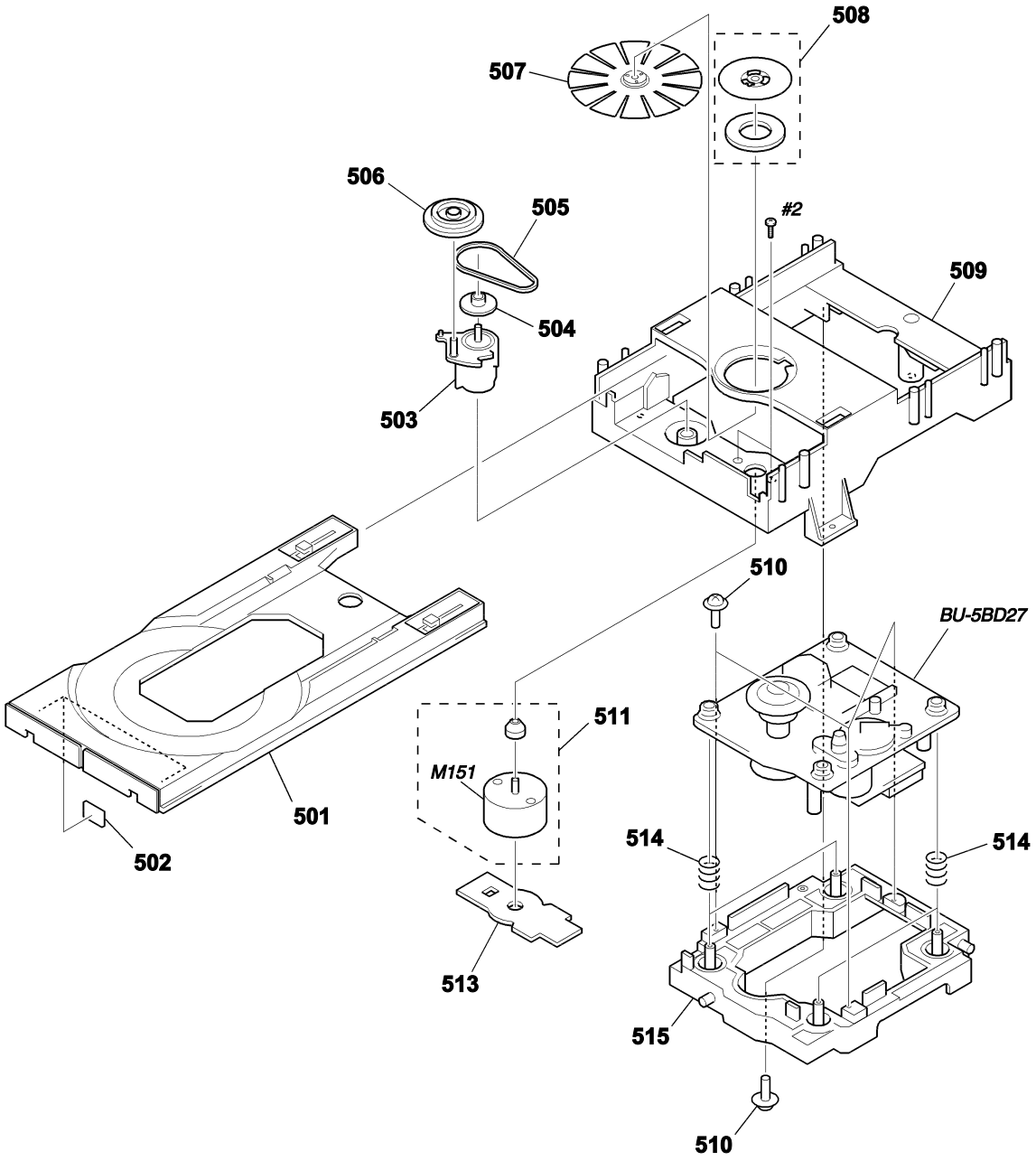
Ref. No.	Part No.	Description	Remark
1	4-232-141-11	PANEL, LOADING (BLACK)	
1	4-232-141-31	PANEL, LOADING (SILVER)	
2	X-4953-448-1	FOOT ASSY	
3	4-232-237-01	FOOT (DIA. 30)	
4	3-703-244-00	BUSHING (2104), CORD (AEP, UK, SP, AUS)	
* 4	3-703-571-12	BUSHING (S) (4516), CORD (US, CND)	
* 5	4-954-051-51	HOLDER, PC BOARD	
⚠6	1-696-845-11	CORD, POWER (AUS)	
⚠6	1-777-071-41	CORD, POWER (AEP, UK, SP)	
⚠6	1-783-531-31	CORD, POWER (US, CND)	
7	1-590-243-11	WIRE (FLAT TYPE) (21 CORE) (XE270: US)	
7	1-773-149-11	WIRE (FLAT TYPE) (21 CORE) (XE270:CND, AEP, UK, SP, AUS/XE370)	
8	4-210-291-01	SCREW (CASE 3 TP2) (BLACK)	
8	4-210-291-11	SCREW (CASE 3 TP2) (SILVER)	
9	4-232-149-21	CASE (408226) (BLACK)	
9	4-232-580-31	CASE (408226) (SILVER)	
10	A-4725-617-A	MAIN BOARD, COMPLETE	
11	4-232-151-01	PANEL, BACK (XE270: AEP)	
11	4-232-151-11	PANEL, BACK (XE270: UK)	
11	4-232-151-21	PANEL, BACK (XE270: US, CND)	
11	4-232-151-31	PANEL, BACK (XE270: AUS)	
11	4-232-151-61	PANEL, BACK (XE270: SP)	
11	4-232-692-01	PANEL, BACK (XE370: AEP)	
11	4-232-692-11	PANEL, BACK (XE370: UK)	
11	4-232-692-21	PANEL, BACK (XE370: US)	
11	4-232-692-31	PANEL, BACK (XE370: AUS)	
11	4-232-692-61	PANEL, BACK (XE370: SP)	
T601	1-437-257-11	TRANSFORMER, POWER (US, CND)	
T601	1-437-258-11	TRANSFORMER, POWER (AUS, SP, AEP, UK)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	

6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-4953-458-1	PANEL ASSY, FRONT (XE370: AEP, UK, SP, AUS)	
51	X-4953-459-1	PANEL ASSY, FRONT (XE270: AEP, UK, SP, AUS) (BLACK)	
51	X-4953-460-1	PANEL ASSY, FRONT (XE270: AEP, UK) (SILVER)	
51	X-4953-553-1	PANEL ASSY, FRONT (XE370: US)	
51	X-4953-554-1	PANEL ASSY, FRONT (XE270: US, CND)	
52	4-231-928-01	KNOB (AMS) (BLACK)	
52	4-231-928-11	KNOB (AMS) (SILVER)	
53	4-231-973-01	BUTTON (POWER) (BLACK)	
53	4-231-973-11	BUTTON (POWER) (SILVER)	
54	1-681-131-11	POWER SW BOARD	
55	4-951-620-01	SCREW (2.6X8), +BVTP	
56	1-681-130-11	KEY BOARD	
57	A-4725-618-A	DISPLAY BOARD, COMPLETE (XE270)	
57	A-4725-616-A	DISPLAY BOARD, COMPLETE (XE370)	
58	1-773-043-11	WIRE (FLAT TYPE) (17 CORE)	

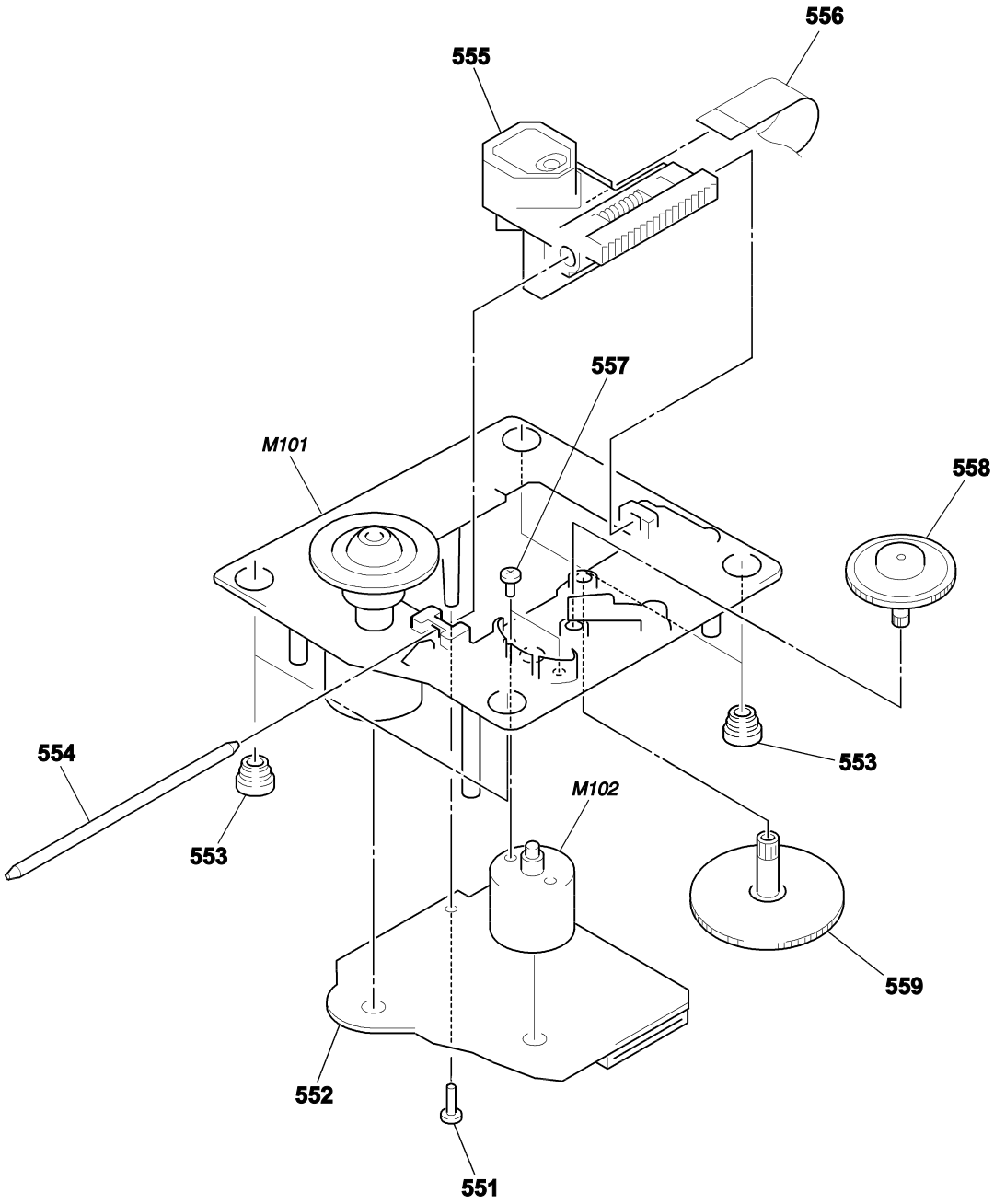
6-3. CD MECHANISM DECK SECTION (CDM66-5BD27)



Ref. No.	Part No.	Description	Remark
501	4-231-530-01	TRAY (66)	
502	4-232-682-01	CUSHION (66)	
503	4-232-712-01	CAM (66)	
504	4-232-710-01	PULLEY (LD)	
505	4-232-713-01	BELT (LD)	
506	4-232-711-01	GEAR (LD)	
507	4-993-142-21	PULLEY (L), PRESS	
508	1-452-925-21	MAGNET ASSY	

Ref. No.	Part No.	Description	Remark
509	4-231-529-01	CHASSIS (66)	
510	4-227-899-01	SCREW (DIA. 12), FROATING	
511	A-4604-363-A	MOTOR (L) ASSY	
513	1-645-721-11	LOADING BOARD	
514	4-959-996-01	SPRING (932), COMPRESSION	
515	4-231-531-01	HOLDER (66)	
M151	1-541-632-12	MOTOR, DC (LOADING)	
#2	7-621-775-10	SCREW +B 2.6X4	

6-4. BASE UNIT SECTION (BU-5BU27)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
552	A-4725-568-A	BD BOARD, COMPLETE	
553	4-951-940-01	INSULATOR (BU)	
554	4-917-565-01	SHAFT, SLED	
⚠555	1-796-033-11	OPTICAL PICK-UP/PXR-104X	
556	1-782-817-11	WIRE (FLAT TYPE) (16 CORE)	
557	3-713-786-51	SCREW +P 2X3	
558	4-917-567-01	GEAR (M)	
559	4-917-564-01	GEAR (P), FLATNESS	
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

BD

SECTION 7
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  AUS : Australian model
  CND : Canadian model
  SP : Singapore model
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-4725-568-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C102	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C103	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C110	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C111	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C112	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C120	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C121	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C122	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C123	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C124	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C125	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C126	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C130	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C131	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C132	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C133	1-126-607-11	ELECT CHIP	47uF	20%	4V
C134	1-126-607-11	ELECT CHIP	47uF	20%	4V
C136	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C137	1-126-209-11	ELECT CHIP	100uF	20%	4V
C138	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C139	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C140	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C145	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V
C150	1-126-204-11	ELECT CHIP	47uF	20%	16V
C151	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C152	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C153	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C154	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C158	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V
C171	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C172	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C173	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C174	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C181	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C182	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C183	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C184	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C191	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C192	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C193	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C194	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C199	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-784-360-11	CONNECTOR, FFC (LIF (NON-ZIF)) 21P			
CN102	1-777-937-11	CONNECTOR, FFC/FPC 16P			
		< RESISTER >			
FB191	1-216-864-11	METAL CHIP	0	5%	1/16W
		< IC >			
IC101	8-752-386-85	IC CXD2587Q			
IC131	8-752-089-74	IC CXA2581N-T4			
IC150	8-759-829-14	IC AN4800SB			
		< TRANSISTOR >			
Q131	8-729-010-08	TRANSISTOR	MSB710-R		
Q132	8-729-600-22	TRANSISTOR	2SA1235-F		
		< RESISTOR >			
R101	1-216-835-11	METAL CHIP	15K	5%	1/16W
R102	1-216-845-11	METAL CHIP	100K	5%	1/16W
R103	1-216-835-11	METAL CHIP	15K	5%	1/16W
R110	1-216-821-11	METAL CHIP	1K	5%	1/16W
R111	1-216-809-11	METAL CHIP	100	5%	1/16W
R112	1-216-833-11	METAL CHIP	10K	5%	1/16W
R120	1-216-839-11	METAL CHIP	33K	5%	1/16W
R121	1-216-833-11	METAL CHIP	10K	5%	1/16W
R122	1-216-845-11	METAL CHIP	100K	5%	1/16W
R123	1-216-857-11	METAL CHIP	1M	5%	1/16W
R125	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R126	1-216-833-11	METAL CHIP	10K	5%	1/16W
R127	1-216-821-11	METAL CHIP	1K	5%	1/16W
R129	1-216-815-11	METAL CHIP	330	5%	1/16W
R134	1-216-853-11	METAL CHIP	470K	5%	1/16W
R135	1-216-836-11	METAL CHIP	18K	5%	1/16W
R136	1-216-836-11	METAL CHIP	18K	5%	1/16W
R137	1-216-797-11	METAL CHIP	10	5%	1/16W
R138	1-216-798-11	RES-CHIP	12	5%	1/16W
R139	1-216-847-11	METAL CHIP	150K	5%	1/16W
R140	1-216-854-11	METAL CHIP	560K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R141	1-216-840-11	METAL CHIP	39K	5%	1/16W
R142	1-216-841-11	METAL CHIP	47K	5%	1/16W
R143	1-216-855-11	METAL CHIP	680K	5%	1/16W
R144	1-216-846-11	METAL CHIP	120K	5%	1/16W
R145	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R146	1-216-845-11	METAL CHIP	100K	5%	1/16W
R149	1-216-821-11	METAL CHIP	1K	5%	1/16W
R151	1-216-845-11	METAL CHIP	100K	5%	1/16W
R152	1-216-833-11	METAL CHIP	10K	5%	1/16W
R153	1-216-864-11	METAL CHIP	0	5%	1/16W
R155	1-216-836-11	METAL CHIP	18K	5%	1/16W
R171	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R172	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R173	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R174	1-216-809-11	METAL CHIP	100	5%	1/16W
R181	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R182	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R183	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R184	1-216-809-11	METAL CHIP	100	5%	1/16W
R191	1-216-817-11	METAL CHIP	470	5%	1/16W
R192	1-216-797-11	METAL CHIP	10	5%	1/16W
		< COMPOSITION CIRCUIT BLOCK >			
RB101	1-233-576-11	RES, CHIP NETWORK 100			
RB102	1-233-576-11	RES, CHIP NETWORK 100			
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
		< VIBRATOR >			
X191	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)			
**********					
	A-4725-616-A	DISPLAY BOARD, COMPLETE (XE370)			
	A-4725-618-A	DISPLAY BOARD, COMPLETE (XE270)			
		**********			
*	4-929-709-31	GUIDE (FL TUBE)			
		< CAPACITOR >			
C501	1-164-159-11	CERAMIC	0.1uF		50V
C502	1-164-159-11	CERAMIC	0.1uF		50V
C531	1-161-494-00	CERAMIC	0.022uF		25V
C532	1-161-494-00	CERAMIC	0.022uF		25V
C561	1-126-382-11	ELECT	100uF	20%	10V
		< CONNECTOR >			
CN501	1-784-778-11	CONNECTOR, FFC 17P			
		< FLUORESCENT INDICATOR TUBE >			
FL501	1-518-745-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC501	8-752-921-32	IC CXP82324-093Q			
IC561	8-759-459-86	IC NJL64H400A			
		(REMOTE CONTROL RECEIVER)			

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q541	8-729-029-66	TRANSISTOR	DTC114ESA		
		< RESISTOR >			
R501	1-249-427-11	CARBON	6.8K	5%	1/4W
R511	1-249-427-11	CARBON	6.8K	5%	1/4W
R521	1-249-427-11	CARBON	6.8K	5%	1/4W
R522	1-249-415-11	CARBON	680	5%	1/4W
R523	1-249-417-11	CARBON	1K	5%	1/4W
R524	1-249-419-11	CARBON	1.5K	5%	1/4W
R525	1-249-421-11	CARBON	2.2K	5%	1/4W
R526	1-247-843-11	CARBON	3.3K	5%	1/4W
R527	1-249-427-11	CARBON	6.8K	5%	1/4W
R528	1-249-431-11	CARBON	15K	5%	1/4W
R531	1-249-427-11	CARBON	6.8K	5%	1/4W
R532	1-249-427-11	CARBON	6.8K	5%	1/4W
R533	1-249-417-11	CARBON	1K	5%	1/4W
R541	1-249-441-11	CARBON	100K	5%	1/4W
R551	1-249-415-11	CARBON	680	5%	1/4W
R552	1-249-417-11	CARBON	1K	5%	1/4W
R561	1-247-807-31	CARBON	100	5%	1/4W
R562	1-247-807-31	CARBON	100	5%	1/4W
		< ROTARY ENCODER/SWITCH >			
S520	1-475-543-11	ENCODER, ROTARY (⏮ AMS ⏭, PUSH ENTER)			
S521	1-771-349-21	SWITCH, KEYBOARD (⏏ OPEN/CLOSE)			
S522	1-771-349-21	SWITCH, KEYBOARD (▷)			
S523	1-771-349-21	SWITCH, KEYBOARD (❚❚)			
S524	1-771-349-21	SWITCH, KEYBOARD (■)			
S526	1-771-349-21	SWITCH, KEYBOARD (◀◀)			
S527	1-771-349-21	SWITCH, KEYBOARD (▶▶)			
		< VIBRATOR >			
X501	1-567-152-00	VIBRATOR, CERAMIC (4MHz)			
**********					
	1-681-130-11	KEY BOARD			
		**********			
		< RESISTOR >			
R502	1-249-415-11	CARBON	680	5%	1/4W
R503	1-249-417-11	CARBON	1K	5%	1/4W
R504	1-249-419-11	CARBON	1.5K	5%	1/4W
		< SWITCH >			
S501	1-771-349-21	SWITCH, KEYBOARD (TIME)			
S502	1-771-349-21	SWITCH, KEYBOARD (PLAY MODE)			
S503	1-771-349-21	SWITCH, KEYBOARD (CLEAR)			
S504	1-771-349-21	SWITCH, KEYBOARD (REPEAT)			
**********					
	1-645-721-11	LOADING BOARD			
		**********			
		< CONNECTOR >			
* CN151	1-568-943-11	PIN, CONNECTOR 5P			

LOADING | MAIN

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S151	1-572-086-11	SWITCH, LEAF (LOAD OUT)			
S152	1-572-086-11	SWITCH, LEAF (LOAD IN)			
**********					
	A-4725-617-A	MAIN BOARD, COMPLETE			
		**********			
	7-685-871-01	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C601	1-128-547-11	ELECT	6800uF	20%	16V
C602	1-126-767-11	ELECT	1000uF	20%	16V
C603	1-128-576-11	ELECT	100uF	20%	63V
C604	1-161-494-00	CERAMIC	0.022uF		25V
C605	1-161-494-00	CERAMIC	0.022uF		25V
C606	1-164-159-11	CERAMIC	0.1uF		50V
C607	1-164-159-11	CERAMIC	0.1uF		50V
C608	1-126-934-11	ELECT	220uF	20%	10V
C609	1-161-494-00	CERAMIC	0.022uF		25V
C610	1-136-165-00	MYLAR	0.1uF	5%	50V
C612	1-161-494-00	CERAMIC	0.022uF		25V
C616	1-126-916-11	ELECT	1000uF	20%	6.3V
C618	1-126-933-11	ELECT	100uF	20%	16V
C619	1-104-656-51	ELECT	2200uF	20%	6.3V
⚠C620	1-113-924-11	CERAMIC	0.0047uF	20%	250V
C631	1-161-494-00	CERAMIC	0.022uF		25V
C641	1-126-964-11	ELECT	10uF	20%	50V
C642	1-126-935-11	ELECT	470uF	20%	10V
C651	1-126-935-11	ELECT	470uF	20%	10V
C653	1-104-666-11	ELECT	220uF	20%	25V
C654	1-164-159-11	CERAMIC	0.1uF		50V
C657	1-164-159-11	CERAMIC	0.1uF		50V
C658	1-164-159-11	CERAMIC	0.1uF		50V
C659	1-161-494-00	CERAMIC	0.022uF		25V
C663	1-162-290-11	CERAMIC	470PF	10%	50V
C675	1-161-494-00	CERAMIC	0.022uF		25V
C677	1-161-494-00	CERAMIC	0.022uF		25V
C682	1-126-963-11	ELECT	4.7uF	20%	50V
C802	1-104-664-11	ELECT	47uF	20%	10V
C808	1-126-933-11	ELECT	100uF	20%	16V
C811	1-162-282-31	CERAMIC	100PF	10%	50V
C902	1-104-664-11	ELECT	47uF	20%	10V
C908	1-126-933-11	ELECT	100uF	20%	16V
C911	1-162-282-31	CERAMIC	100PF	10%	50V
		< CONNECTOR >			
CN621	1-784-778-11	CONNECTOR, FFC 17P			
CN651	1-568-838-11	CONNECTOR, FFC 21P			
		< DIODE >			
D601	8-719-024-99	DIODE	11ES2-NTA2B		
D602	8-719-024-99	DIODE	11ES2-NTA2B		
D603	8-719-024-99	DIODE	11ES2-NTA2B		
D604	8-719-024-99	DIODE	11ES2-NTA2B		
D605	8-719-024-99	DIODE	11ES2-NTA2B		
D612	8-719-210-21	DIODE	11EQS04		
D613	8-719-210-21	DIODE	11EQS04		

Ref. No.	Part No.	Description			Remark
D614	8-719-947-13	DIODE	MTZJ-T-72-4.7B		
D615	8-719-911-19	DIODE	1SS119-25		
D616	8-719-911-19	DIODE	1SS119-25		
D631	8-719-983-63	DIODE	MTZJ-T-72-3.3B		
D641	8-719-983-84	DIODE	MTZJ-T-72-30D		
D643	8-719-109-85	DIODE	RD5.1ESB2		
D681	8-719-911-19	DIODE	1SS119-25		
D682	8-719-911-19	DIODE	1SS119-25		
D691	8-719-911-19	DIODE	1SS119-25		
D692	8-719-911-19	DIODE	1SS119-25		
		< IC >			
IC601	8-759-039-69	IC	uPC7805AHF		
IC602	8-749-011-78	IC	BA17807T		
IC603	8-759-165-81	IC	PST600D-T		
IC631	8-759-598-69	IC	BA6956AN		
IC651	8-749-921-12	IC	GP1F32T (DIGITAL OUT OPTICAL)		
IC801	8-759-711-35	IC	NJM4580D		
		< JACK >			
J681	1-785-868-11	JACK, PIN 2P (ANALOG OUT)			
		< COIL >			
L651	1-414-151-21	INDUCTOR	470uH		
		< TRANSISTOR >			
Q642	8-729-041-38	TRANSISTOR	2SB1241TV2Q		
Q681	8-729-029-56	TRANSISTOR	DTA144ESA		
Q682	8-729-922-37	TRANSISTOR	2SD2144S-UVW		
Q691	8-729-029-56	TRANSISTOR	DTA144ESA		
Q692	8-729-922-37	TRANSISTOR	2SD2144S-UVW		
		< RESISTOR >			
R606	1-247-769-11	CARBON	2.7	5%	1/4W
R607	1-247-769-11	CARBON	2.7	5%	1/4W
R611	1-249-429-11	CARBON	10K	5%	1/4W
R612	1-249-411-11	CARBON	330	5%	1/4W
R631	1-249-427-11	CARBON	6.8K	5%	1/4W
R632	1-215-421-00	METAL	1K	1%	1/4W
R641	1-249-432-11	CARBON	18K	5%	1/4W
R642	1-249-432-11	CARBON	18K	5%	1/4W
R646	1-249-432-11	CARBON	18K	5%	1/4W
R647	1-247-807-31	CARBON	100	5%	1/4W
R648	1-247-807-31	CARBON	100	5%	1/4W
R651	1-247-807-31	CARBON	100	5%	1/4W
R652	1-247-807-31	CARBON	100	5%	1/4W
R653	1-247-807-31	CARBON	100	5%	1/4W
R681	1-249-441-11	CARBON	100K	5%	1/4W
R682	1-249-419-11	CARBON	1.5K	5%	1/4W
R691	1-249-441-11	CARBON	100K	5%	1/4W
R692	1-249-419-11	CARBON	1.5K	5%	1/4W
R804	1-215-445-00	METAL	10K	1%	1/4W
R805	1-215-445-00	METAL	10K	1%	1/4W
R806	1-215-445-00	METAL	10K	1%	1/4W
R809	1-249-441-11	CARBON	100K	5%	1/4W
R810	1-249-414-11	CARBON	560	5%	1/4W
R812	1-247-807-31	CARBON	100	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
R904	1-215-445-00	METAL	10K	1%	1/4W
R905	1-215-445-00	METAL	10K	1%	1/4W
R906	1-215-445-00	METAL	10K	1%	1/4W
R909	1-249-441-11	CARBON	100K	5%	1/4W
R910	1-249-414-11	CARBON	560	5%	1/4W
R912	1-247-807-31	CARBON	100	5%	1/4W
**********					
	1-681-131-11	POWER SW BOARD			
		**********			
		< CAPACITOR >			
⚠C621	1-113-924-11	CERAMIC	0.0047uF	20%	250V
		< CONNECTOR >			
* CN601	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P			
CN602	1-564-321-00	PIN, CONNECTOR 2P			
		< SWITCH >			
⚠S601	1-762-581-11	SWITCH, AC POWER PUSH (1KEY) (POWER)			
**********					
		MISCELLANEOUS			
		**********			
⚠6	1-696-845-11	CORD, POWER (AUS)			
⚠6	1-777-071-41	CORD, POWER (AEP, UK, SP)			
⚠6	1-783-531-31	CORD, POWER (US, CND)			
7	1-590-243-11	WIRE (FLAT TYPE) (21 CORE) (XE270: US)			
7	1-773-149-11	WIRE (FLAT TYPE) (21 CORE) (XE270: CND, AEP, UK, SP, AUS/XE370)			
58	1-773-043-11	WIRE (FLAT TYPE) (17 CORE)			
508	1-452-925-21	MAGNET ASSY			
511	A-4604-363-A	MOTOR (L) ASSY			
⚠555	1-796-033-11	OPTICAL PICK-UP/PXR-104X			
556	1-782-817-11	WIRE (FLAT TYPE) (16 CORE)			
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)			
M102	X-4917-504-1	MOTOR ASSY (SLED)			
M151	1-541-632-12	MOTOR, DC (LOADING)			
T601	1-437-257-11	TRANSFORMER, POWER (US, CND)			
T601	1-437-258-11	TRANSFORMER, POWER (AEP, UK, SP, AUS)			
**********					
		ACCESSORIES & PACKING MATERIALS			
		**********			
⚠	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)			
	1-418-765-11	REMOTE COMMANDER (RM-DX740) (XE370)			
	1-776-263-11	CORD, CONNECTION (RCA AUDIO CORD)			
	4-233-601-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (XE270: CND, AEP/XE370: AEP)			
	4-233-601-21	MANUAL, INSTRUCTION (GERMAN, SPANISH, DUTCH, SWEDISH, ITALIAN, POLISH) (AEP)			
	4-233-601-61	MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (SP)			
	4-233-601-71	MANUAL, INSTRUCTION (ENGLISH) (US, UK, SP, AUS)			
	4-983-956-01	COVER, BATTERY(for RM-DX740) (XE370)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.